What is claimed is:

1. In a data communication network including at least one sending node for transmitting packet data and one receiving node for receiving packet data, a method for optimizing data packet transmission through a connection between the sending node and the receiving node, comprising the steps of:

(a) periodically determining current network conditions in the connection between the sending node and the receiving node wherein the network conditions pertain to the latency and jitter of packet transmission between the sending node and receiving node, and

(b) for each measurement of the latency and jitter of the connection, determining an optimum packet size and an optimum inter-packet interval for transmission of packet data between the sending node and the receiving node.

2. The method for optimizing data packet transmission through a connection between the sending node and the receiving node of claim 1, wherein in step (b) further includes:

(1) determining the optimum packet size and the optimum inter-packet interval for transmission of packet data between the sending node and the receiving node for a given amount and type of data to be communicated between the sending node and the receiving node.

3. The method for optimizing data packet transmission through a connection between the sending node and the receiving node of claim 1, wherein step (a) further includes the steps of:

(a1) transmitting a sequence of monitor packets from the sending node to the receiving node, each monitor packet including

a departure time representing a time the monitor packet was transmitted from the sending node, a packet size representing a size of the monitor packet and a packet number representing a numerical position of the monitor packet in the sequence of monitor packets,

(a2) in the receiving node, reflecting the monitor packets from the receiving node to the sending node in the sequence in which the monitor packets are received at the sending node, and

(a3) in the sending node and upon receiving the reflected monitor packets from the receiving node, determining network conditions in the connection between the sending node and the receiving node wherein the network conditions pertain to the latency and jitter of packet transmission between the sending node and receiving node for monitor packets of a known size and known inter-packet transmission interval.

4. The method for optimizing data packet transmission through a connection between the sending node and the receiving node of claim 3, wherein:

(1) the network conditions determined through the monitor packets include a maximum two way delay time for the transmission and reflection of a monitor packet, a minimum two way delay time for the transmission and reflection of a monitor packet, an average two way delay time for the monitor packets, an average jitter of the monitor packets, and a number of packets out of sequence.

5. The method for optimizing data packet transmission through a connection between the sending node and the receiving node of claim 4, wherein the network conditions determined through the monitor packets further include:

(2) a number of packets lost.

6. The method for optimizing data packet transmission through a connection between the sending node and the receiving node of claim 3, wherein:

(1) the network conditions determined through the monitor packets further include an average available bandwidth, an average jitter, a maximum jitter and a minimum jitter.

7. The method for optimizing data packet transmission through a connection between the sending node and the receiving node of claim 1, further comprising the step of:

(c) transmitting data packets from the sending node to the receiving node with packet sizes and at inter-packet intervals determined according to the network conditions.

8. The method for optimizing data packet transmission through a connection between the sending node and the receiving node of claim 1, further comprising the steps of:

(a1) transmitting a sequence of monitor packets from the sending node to the receiving node, each monitor packet including

a departure time representing a time the monitor packet was transmitted from the sending node, a packet size representing a size of the monitor packet and a packet number representing a numerical position of the monitor packet in the sequence of monitor packets,

(a2) in the receiving node, reflecting the monitor packets from the receiving node to the sending node in the sequence in which the monitor packets are received at the sending node, and

(a3) in the sending node and upon receiving the reflected monitor packets from the receiving node, determining network conditions in the connection between the sending node and the receiving node wherein the network conditions pertain to the latency and jitter of packet transmission between the sending node and receiving node for monitor packets of a known size and known inter-packet transmission interval, and

(c) in the sending node and from the network conditions, determining an optimum packet size and an optimum inter-packet interval for transmitting packets from the sending node to the receiving node.

9. The method for optimizing data packet transmission through a connection between the sending node and the receiving node of claim 8, further comprising the steps of:

(d) in the receiving node, determining network conditions from the received monitor packets.

10. The method for optimizing data packet transmission through a connection between the sending node and the receiving node of claim 9, further comprising the steps of:

(e) in the receiving node, storing the network conditions in one or more condition records.

11. The method for optimizing data packet transmission through a connection between the sending node and the receiving node of claim 9, further comprising the steps of:

(d) returning the network conditions determined in the receiving node to the sending node, and

(e) in the sending node, updating the optimum packet size and inter-packet interval using the network conditions determined in the receiving node.

12. In a data communication network including at least one sending node for transmitting packet data and one receiving node for receiving packet data, a method for optimizing data packet transmission through a connection between the sending node and the receiving node, comprising the steps of:

(a) transmitting packets from the sending node to the receiving node,

(b) in the receiving node and for each packet received from the sending node, generating and transmitting to the sending node an acknowledgment of receipt of the packet, and

(c) in the sending node and upon receiving the acknowledgments of packets from the receiving node, determining network conditions in the connection between the sending node and the receiving node wherein the network conditions pertain to the latency and jitter of packet transmission between the sending node and receiving node for monitor packets of a known size and known inter-packet transmission interval, and

(c) in the receiving node and from the network conditions, determining an optimum packet size and optimum inter-packet interval for transmission of data packets to the receiving node.

13. In a data communication network including at least one sending node for transmitting packet data and one receiving node for receiving packet data, a method for optimizing data packet transmission through a connection between the sending node and the receiving node, comprising the steps of:

(a) transmitting a sequence of data packets from the sending node to the receiving node,

(b) in the receiving node, determining network conditions from the received data packets

(c) returning the network conditions determined in the receiving node to the sending node, and

(d) in the sending node, using the network conditions determined in the receiving node to determine an optimum packet size and an optimum inter-packet interval for the transmission of data packets from the sending node to the receiving node.